

# sequence listing

<110> CreaGene Inc.  
 <120> METHOD FOR IMPROVING GENETIC STABILITY OF FOREIGN INSERT  
 NUCLEOTIDE SEQUENCE IN RECOMBINANT SINGLE-STRANDED RNA VIRUS  
 <130> CreaGene-USA-1  
 <150> KR 2001-6229  
 <151> 2001-02-08  
 <160> 95  
 <170> KopatentIn 1.71  
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 <212> DNA  
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 <220>  
 <223> SIV gag-100

<400> 1  
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 gtagtgccag gatttcaggc actgtcagaa ggttgcaccc cctatgacat taatcagatg 120  
 ttaaattgtg tgggagacca tcaagcggct atgcagatta tcagagatat tataaacgag 180  
 gaggctgcag attgggactt gcagcaccca caaccagctc cacaacaagg acaacttagg 240  
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 300

<210> 2  
 <211> 300  
 <212> DNA  
 <213> Artificial Sequence  
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 <223> SIV gag-100/M

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 gtagttccag gatttcaagc attatcagaa ggttgtactc catatgatat taatcaaag 120  
 ttaaattgtg taggagatca tcaagcagct atgcaaatta taagagatat tataaatgaa 180  
 gaagctgcag attgggattt acaacatcca caaccagctc cacaacaagg acaattaaga 240  
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<210> 3  
 <211> 342  
 <212> DNA

# sequence listing

<213> Artificial Sequence

<220>

<223> SIV gag-114

<400> 3

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gcactgtcag	aaggttgcac	cccctatgac	attaatcaga	tggttaaattg	tgtgggagac	180
catcaagcgg	ctatgcagat	tatcagagat	attataaacg	aggaggctgc	agattgggac	240
ttgcagcacc	cacaaccagc	tccacaacaa	ggacaactta	gggagccgtc	aggatcagat	300
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<210> 4

<211> 501

<212> DNA

<213> Artificial Sequence

<220>

<223> SIV p27-167

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gcactgtcag	aaggttgcac	cccctatgac	attaatcaga	tggttaaattg	tgtgggagac	180
catcaagcgg	ctatgcagat	tatcagagat	attataaacg	aggaggctgc	agattgggac	240
ttgcagcacc	cacaaccagc	tccacaacaa	ggacaactta	gggagccgtc	aggatcagat	300
attgcaggaa	caactagttc	agtagatgaa	caaatccagt	ggatgtacag	acaacagaac	360
cccataccag	taggcaacat	ttacaggaga	tggatccaac	tggggttgca	aaaatgtgtc	420
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<210> 5

<211> 450

<212> DNA

<213> Artificial Sequence

<220>

<223> SIV p27-150

<400> 5

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gcctgggtaa	aattgataga	ggaaaagaaa	tttggagcag	aagtagtgcc	aggatttcag	120

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gcactgtcag aaggttgac cccctatgac attaatcaga tgttaaattg tgtgggagac 180  
catcaagcgg ctatgcagat tatcagagat attataaacg aggaggctgc agattgggac 240  
ttgcagcacc cacaaccagc tccacaacaa ggacaactta gggagccgctc aggatcagat 300  
attgcaggaa caactagttc agtagatgaa caaatccagt ggatgtacag acaacagaac 360  
cccataccag taggcaacat ttacaggaga tggatccaac tgggggttgca aaaatgtgtc 420  
agaatgtata acccaacaaa cattctagat 450

<210> 6  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> SIV env-108

<400> 6  
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catggtaggg ataataggac tataattagt ttataataagt attataatct aacaatgaaa 120  
tgtagaagac caggaaataa gacagtttta ccagtcacca ttatgtctgg attggttttc 180  
cactcacaac caatcaatga taggccaag caggcatggg gttgggttgaggaggaaatgg 240  
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aacaatactg ataaaatcaa tttg 324

<210> 7  
<211> 324  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> SIV env-108/M

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tgcaggagac caggaaataa gacagtgtta ccagtcacca tcatgtccgg gttgggtcttc 180  
cactcacagc ccatcaatga caggcccaag caggcctggg gttgggttcgg aggcaagtgg 240  
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aacaacactg acaagatcaa tttg 324

<210> 8  
<211> 294  
<212> DNA  
<213> Artificial Sequence

# sequence listing

<220>  
<223> HIV-1 env-98

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gctaaaacca taatagtaca gctaaatgaa tctgtagtaa ttaattgtac aagaccaac 120  
aacaatacaa gaagaagggtt atctatagga ccagggagag cattttatgc aagaagaaac 180  
ataataggag atataagaca agcacattgt aacattagta gagcaaaatg gaataacact 240  
ttacaacaga tagttataaa attaagagaa aaatttagga ataaaacaat agcc 294

<210> 9  
<211> 294  
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<213> Artificial Sequence

<220>  
<223> HIV-1 env-98/M

<400> 9  
ttaaatggca gtctagcaga agaagacata gtaattagat ctgaaaattt cacagacaat 60  
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aacaatacaa gaagaagggtt atctatagga ccagggagag cattttatgc aagaagaaac 180  
ataataggag atataagaca agcacattgt aacattagta gagcaaaatg gaataacact 240  
ttacaacaga tcgtgatcaa gcttcgggag aagttccgga acaagacgat cgcc 294

<210> 10  
<211> 249  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> HIV-1 env-83

<400> 10  
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gctaaaacca taatagtaca gctaaatgaa tctgtagtaa ttaattgtac aagaccaac 120  
aacaatacaa gaagaagggtt atctatagga ccagggagag cattttatgc aagaagaaac 180  
ataataggag atataagaca agcacattgt aacattagta gagcaaaatg gaataacact 240  
ttacaacag 249

<210> 11  
<211> 213  
<212> DNA  
<213> Artificial Sequence

## sequence listing

<220>  
<223> HIV-1 env-71

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ctaaatgaat ctgtagtaat taattgtaca agaccacaaca acaatacaag aagaaggtta      60
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gcacattgta acattagtag agcaaaatgg aataacactt tacaacagat agttataaaa      180
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<210>	12
<211>	381
<212>	DNA
<213>	Artificial Sequence

<220>  
<223> PV 2-127

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actcgtcacg tcatccaaaa gcggacgcgg tcggagtcta cggttgagtc tttcttcgca		120
agaggagctt gtgtggccat tattgaagtg gataatgatg ctccaacaag gcgtgccagt		180
aaattatttt cagtctggaa gataacttac aaggacaccg ttcagttaag acgtaagttg		240
gagttcttta catattcaag gtttgacatg gagttcacct ttgtggttac atccaattat		300
accgatgcaa acaatgggca cgcactgaat caagtttacc agataatgta cataccacct		360
ggggcaccga tccttgcaa g		381

$\langle 210 \rangle$	13
$\langle 211 \rangle$	354
$\langle 212 \rangle$	DNA
$\langle 213 \rangle$	Artificial Sequence

<220>  
<223> PV 2-118

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tttacatatt	caaggtttga	catggagttc	acctttgtgg	ttacatccaa	ttataccgat		180
gcaaacaatg	ggcacgcact	gaatcaagtt	taccagataa	tgtacatacc	acctggggca		240
ccgatccctg	gcaagcggaa	tgattacaca	tggcaaacgt	catctaacc	atcagtgttt		300
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# sequence listing

<210> 14  
<211> 330  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PV 3-110

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gcgtgcgtcg ctattattga ggtggacaat gaacaaccaa ccacccgggc acagaaacta 120  
tttgccatgt ggcgcattac atacaaagat acagtgcagt tgcgccgtaa gttggagttt 180  
ttcacatact ctcgttttga catggaattc accttcgtgg taaccgcaa cttcaccaac 240  
gctaataatg ggcattgcact caaccaggtg taccagataa tgtacatccc cccaggggca 300  
cccacaccaa agtcatggga cgactacact 330

<210> 15  
<211> 480  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> HCV core-160

<400> 15  
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ggccccaggt tgggtgtgct cgcgactagg aagacttccg agcggtcgca acctcgtgga 180  
aggcgacagc ctatcccaa ggctcgcaa cccgagggta ggacctgggc tcagccccggg 240  
tacccttggc ccctctatgg caatgagggg ctgggatggg caggatggct cctgtcacc 300  
cgcggtcttc ggcctagttg gggccccaca gacccccggc gtaggtcgcg taatttggt 360  
aaggtcatcg atactctcac atgcggcttc gccgacctca tggggtacat tccgctcgtc 420  
ggcgcccccc tagggggcgt tgccagggcc ttggcacatg gtgtccggct tctggaggac 480  
480

<210> 16  
<211> 300  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> HCV core-100

<400> 16  
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# sequence listing

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aggcgacagc ctatcccaa ggctcgccaa cccgagggtg ggacctgggc tcagcccggg	240
tacccttggc ccctctatgg caatgagggt ctgggatggg caggatggct cctgtcaccc	300
	300

<210> 17  
 <211> 399  
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<220>  
 <223> PV 2.3-131

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agaggagctt gtgtggccat tattgaagtg gataatgatg ctccaacaag gcgtgccagt	180
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cgcgggggcgt gcgtcgctat tattgagggt gacaatgaac aaccaaccac ccgggcacag	300
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gagtttttca catactctcg ttttgacatg gaattcacc	399

<210> 18  
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 <212> DNA  
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<220>  
 <223> PV 2.3-112

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tttacaatatt caaggtttga catggagttc acctttgtgg ttacaggatc cgcggtgcgtc	180
gctattattg aggtggacaa tgaacaacca accacccggg cacagaaact atttgccatg	240
tggcgcatta catacaaaga tacagtgcag ttgcgccgta agttggagtt tttcacatac	300
tctcgttttg acatggaatt caccttcgtg gtaacc	336

<210> 19  
 <211> 306  
 <212> DNA

# sequence listing

<213> Artificial Sequence

<220>

<223> HBVcs

<400> 19

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tcctttggag tgtggattcg cactcctcct gcatatagac caccaaagtc ccctatctta	120
tcaacacttc cggaaactac tggtgttaga gaattcccag gatcatcaac caccagcacg	180
ggaccatgca agacttgac agctcctgct caaggaacct ctatgtttcc ctcatgttgc	240
tgtacaaaac ctacggacgg aaactgcacc tgtattccca tcccatcatc ttgggctttc	300
gcaaaa	306

<210> 20

<211> 360

<212> DNA

<213> Artificial Sequence

<220>

<223> HIV-1 mv3

<400> 20

attaattgta caagaccaa caacaataga agaagaaggt tatctatagg accagggaga	60
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ttcattaatt gtacaagacc caacaacaat acaagaagaa ggttatctat aggaccagg	180
agagcatttt atgcaagaag aaacataata ggagatataa gacaagcaca ttgtaacatt	240
ctgcagatta attgtacaag acccaacaac aatacaagaa gaaggttatc tataggacca	300
gggagagcat tttatgcaag aagaaacata ataggagata taagacaagc acattgtaac	360
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<210> 21

<211> 240

<212> DNA

<213> Artificial Sequence

<220>

<223> HIV-1 PND8

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tctataggac caggagagc attttatgca tctataggac caggagagc attttatgca	120
tctataggac caggagagc attttatgca tctataggac caggagagc attttatgca	180
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# sequence listing

240

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<212> DNA  
<213> Artificial Sequence

<220>  
<223> PVM-150/M

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aagctcttca gcgaattcga ggtcgataat gagcagccca ctacccgagc ccagaagctc 180  
ttcgccatgt ggcgatcac ttacaaggac aatgatgctg caactaagcg cgcattctaaa 240  
ctgtgcgtcc gaattacat gaagcccaag cacgttcgat gtcctggctg tcccgtatt 300  
atcgaagtgg ataacgacgc accaaccaaa cgggcatcaa agctggacaa ctaccagtcc 360  
ccatgcgcga tcaacgagca acctaccacc cgtgcgcaa agtccgctgg gtgcttctat 420  
cagaccgcg tcgtggttcc ctgaggttgt 450

<210> 23  
<211> 411  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PVM-137/M

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actaccgag cccagaagct cttcgccatg tggcgatca cttacaagga caatgatgctg 180  
ccaactaagc gcgcatctaa actgtgcgtc cgaatctaca tgaagcccaa gcacgttcga 240  
tgctccggt gtcccgtat tatcgaagt gataacgacg caccaaccaa acgggcatca 300  
aagctggaca actaccagtc cccatgcgcg atcaacgagc aacctaccac ccgtgcgcaa 360  
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<210> 24  
<211> 396  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PVM-132/M

# sequence listing

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aagctcttcg ccatgtggcg tatcacttac aaggacaatg atgcgccaac taagcgcgca 180  
tctaaactgt gcgtccgaat ctacatgaag cccaagcacg ttcgatgctc cggctgtccc 240  
gctattatcg aagtggataa cgacgcacca accaaacggg catcaaagct ggacaactac 300  
cagtcccat gcgcgatcaa cgagcaacct accacccgtg cgcaaaagtc cgctgggtgc 360  
ttctatcaga cccgctcgtt ggttcctca ggttgt 396

<210> 25  
<211> 31  
<212> DNA  
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<220>  
<223> sense primer for PCR amplification of SIV gag-100

<400> 25  
attataccgc ggagcccgag aacattaaat g 31

<210> 26  
<211> 31  
<212> DNA  
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<220>  
<223> antisense primer for PCR amplification of SIV gag-100

<400> 26  
attattgccg gccactgga tttgttcac t 31

<210> 27  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer for PCR amplification of SIV gag-114

<400> 27  
ttaattccgc ggccagtaca acaaataagg t gg 32

<210> 28  
<211> 33  
<212> DNA  
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<220>  
<223> antisense primer for PCR amplification of SIV gag-114

# sequence listing

<400> 28  
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<210> 29  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer for PCR amplification of SIV p27-167

<400> 29  
atattaccgc ggccagtaca acaaataggt g 31

<210> 30  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer for PCR amplification of SIV p27-167

<400> 30  
ttaattgccg gcgtagaacc tgtctacata gct 33

<210> 31  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer for PCR amplification of SIV p27-150

<400> 31  
tataatccgc ggccagtaca acaaataggt gg 32

<210> 32  
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<212> DNA  
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<400> 32  
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<210> 33  
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# sequence listing

<220>  
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<210> 34  
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 <212> DNA  
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<220>  
 <223> antisense primer for PCR amplification of SIV env-108/M

<400> 34  
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<210> 35  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> sense primer for PCR amplification of HIV-1 env-98

<400> 35  
 ataataccgc ggttaaattgg cagtctagca gaaga 35

<210> 36  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> antisense primer for PCR amplification of HIV-1 env-98

<400> 36  
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<210> 37  
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<220>  
 <223> sense primer for PCR amplification of HIV-1 env-83

<400> 37  
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<210> 38  
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# sequence listing

<213> Artificial Sequence

<220>

<223> antisense primer for PCR amplification of HIV-1 env-83

<400> 38

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33

<210> 39

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> sense primer for PCR amplification of HIV-1 env-71

<400> 39

aataaccgc ggctaaatga atctgtagta atta

34

<210> 40

<211> 35

<212> DNA

<213> Artificial Sequence

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<223> antisense primer for PCR amplification of HIV-1 env-71

<400> 40

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35

<210> 41

<211> 34

<212> DNA

<213> Artificial Sequence

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<223> sense primer for PCR amplification of HIV-1 env-98/M

<400> 41

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34

<210> 42

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> antisense primer for PCR amplification of HIV-1 env-98/M

<400> 42

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35

<210> 43

# sequence listing

<211> 30  
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 <400> 46  
 ataatagccg gcggcaatgc ccacgtaggg 30  
  
 <210> 47  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> sense primer for PCR amplification of PV 3-110  
  
 <400> 47  
 ataataccgc ggcacgtagt ccaacgacgc 30

# sequence listing

<210> 48  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> antisense primer for PCR amplification of PV 3-110  
  
 <400> 48  
 aataatgccg gcagtgtagt cgtcccatga 30  
  
 <210> 49  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> sense primer for PCR amplification of HCV core-160  
  
 <400> 49  
 ataataccgc ggatgagcac aaatcctaaa cc 32  
  
 <210> 50  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> antisense primer for PCR amplification of HCV core-160  
  
 <400> 50  
 ttaattgccg gcgtcctcca gaagccggac ac 32  
  
 <210> 51  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> sense primer for PCR amplification of HCV core-100  
  
 <400> 51  
 aatataccgc ggatgagcac aaatcctaaa cctcaa 36  
  
 <210> 52  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> antisense primer for PCR amplification of HCV core-100  
  
 <400> 52

# sequence listing

atatttgccg gcgggtgaca ggagccatcc t 31

<210> 53  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer for PCR amplification of HBVsAg-100

<400> 53  
atatatccgc ggcttctgga ctatcaaggt at 32

<210> 54  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer for PCR amplification of HBVsAg-100

<400> 54  
ataaatgccg gccatataa ctgaaagcca ga 32

<210> 55  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer for PCR amplification of HBVsAg-76

<400> 55  
attattccgc ggatggagag catcgcatca 30

<210> 56  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer for PCR amplification of HBVsAg-76

<400> 56  
ataatagccg gcacacatcc agcgataacc 30

<210> 57  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(Sst II/ w2: 2608-2623) for PCR amplification of PV2,3-131



# sequence listing

<400> 57  
attaatccgc gggcgctgac agccgta 27

<210> 58  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer(EcoR I/W2: 2800-2814) for PCR amplification of  
PV2,3-131

<400> 58  
atattagaat tcagttatct tccagactga 30

<210> 59  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(EcoR I/Leon: 2690-2707) for PCR amplification of  
PV2,3-131

<400> 59  
attatcgaat tcgagtccac aatagaatca 30

<210> 60  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer(Eag I/Leon: 2958-2975) for PCR amplification of  
PV2,3-131

<400> 60  
attaatcggc cgttccatgt caaaacgaga 30

<210> 61  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(Sst II/W2 VP1: 253-269) for PCR amplification of  
PV2,3-112

<400> 61  
attaatccgc gggcttgtgt ggccattat 29

<210> 62

# sequence listing

<211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> antisense primer(BamH I/w2 VP1: 417-400) for PCR amplification of PV2,3-112  
  
 <400> 62  
 atattaggat cctgtaacca caaaggtgaa 30  
  
 <210> 63  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> sense primer(BamH I/Leon VP1: 274-261) for PCR amplification of PV2,3-112  
  
 <400> 63  
 attatcggat ccgctgctgcgt cgctatt 27  
  
 <210> 64  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> antisense primer(Eag I/Leon VP1: 411-396) for PCR amplification of PV2,3-112  
  
 <400> 64  
 attaatcggc cgggttacca cgaaggtg 28  
  
 <210> 65  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> sense primer(core-Sst II) for PCR amplification of HBVcs  
  
 <400> 65  
 aatataccgc ggttggtggtt tccatttcct 30  
  
 <210> 66  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> antisense primer(core-Hind III) for PCR amplification of HBVcs

# sequence listing

<400> 66  
cctgggaatt ctctaacaac agtagtttc 29

<210> 67  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(surface-Hind III) for PCR amplification of HBVcs

<400> 67  
atatatgaat tcccaggatc atcaaccacc 30

<210> 68  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer(surface-Eag I) for PCR amplification of HBVcs

<400> 68  
ataatagccg gcttttgcca aagcccaaga tga 33

<210> 69  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(BamH I-V3) for PCR amplification of HIV-1 mV3

<400> 69  
accggtgctc cactgctgtt aaatggcagt 30

<210> 70  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer(EcoR I-V3) for PCR amplification of HIV-1 mV3

<400> 70  
ctacagaatt caatgttaca atgtgctt 28

<210> 71  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(EcoR I-V3) for PCR amplification of HIV-1 mV3

# sequence listing

<400> 71  
ctacagaatt cattaattgt acaagacc 28

<210> 72  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer(V3-PstI) for PCR amplification of HIV-1 mV3

<400> 72  
caagtctgca gaatgttaca atgtgctt 28

<210> 73  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(PstI-V3) for PCR amplification of HIV-1 mV3

<400> 73  
caagtctgca gattaattgt acaagacc 28

<210> 74  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> antisense primer(V3-Hind III) for PCR amplification of HIV-1 mV3

<400> 74  
gcattaagct taaatgttac aatgtgcttg tc 32

<210> 75  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer(SstII-V3) for PCR amplification of HIV-1 mV3

<400> 75  
aggcctccgc ggattaattg tacaagacc 29

<210> 76  
<211> 29  
<212> DNA  
<213> Artificial Sequence

# sequence listing

<220>  
 <223> antisense primer(V3-EagI) for PCR amplification of HIV-1 mv3

<400> 76  
 aggcctcggc cgaatgttac aatgtgctt 29

<210> 77  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> sense primer(PND) for PCR amplification of HIV-1 PND8

<400> 77  
 cagaggggac cagggagagc atttgttaca 30

<210> 78  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> antisense primer(PND) for PCR amplification of HIV-1 PND8

<400> 78  
 cctctgtgta acaaatgctc tccctggtcc 30

<210> 79  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> sense primer(SstII-PND) for PCR amplification of HIV-1 PND8

<400> 79  
 aggcctccgc ggcagagggg accaggg 27

<210> 80  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> antisense primer(PND-EagI) for PCR amplification of HIV-1 PND8

<400> 80  
 aacgttcggc cgtgtaacaa atgctctccc 30

<210> 81  
 <211> 77  
 <212> DNA

# sequence listing

<213> Artificial Sequence

<220>

<223> primer 1/Sst II for ligation-free PCR amplification of Pvm-150 and Pvm-150/M

<400> 81

attataccgc gggctaaggc cgttgcagcc tggaccctga aagccgctgc aggccaagcc 60

tccaccgaag gcgactg 77

<210> 82

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 2 for ligation-free PCR amplification of Pvm-150

<400> 82

gctggctcgc ttggtagggg catcggtatc gacctcgatg atggctgggc aaccgcagtc 60

gccttcggtg 70

<210> 83

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 3 for ligation-free PCR of Pvm-150

<400> 83

accaagcgag ccagcaagct cttcagcgaa ttcgaggctg ataatgagca gccactacc 60

cgagcccaga 70

<210> 84

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> primer 4 for ligation-free PCR amplification of Pvm-150

<400> 84

cgcttagttg gcgcatcatt gtccttgtaa gtgatacgcc acatggcgaa gagcttctgg 60

gctcgggtag 70

<210> 85

<211> 70

<212> DNA

<213> Artificial Sequence

# sequence listing

<220>  
 <223> primer 5 for ligation-free PCR amplification of Pvm-150

<400> 85  
 tgcgccaact aagcgcgcat ctaaactgtg cgtccgaatc tacatgaagc ccaagcacgt 60  
 tcgatgctcc 70

<210> 86  
 <211> 70  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer 6 for ligation-free PCR amplification of Pvm-150

<400> 86  
 ttgatgcccg tttggttggt gcgtcggtat ccacttcgat aatagcggga cagccggagc 60  
 atcgaacgtg 70

<210> 87  
 <211> 70  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer 7 for ligation-free PCR amplification of Pvm-150

<400> 87  
 ccaaacgggc atcaaagctg gacaactacc agtcccatg cgcgatcaac gagcaaccta 60  
 ccacccgtgc 70

<210> 88  
 <211> 82  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer 8/Eag I for ligation-free PCR amplification of Pvm-150

<400> 88  
 tattaacggc cgacaacctg agggaaccac gacgcgggtc tgatagaagc acccagcgga 60  
 cttttgcgca cgggtggtag gt 82

<210> 89  
 <211> 70  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer 2 for ligation-free PCR amplification of Pvm-150/M

# sequence listing

<400> 89  
actggcacgc tttgttgag catcattatc cacttcaata atggctgggc aaccgcagtc 60  
gccttcggtg 70

<210> 90  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer 3 for ligation-free PCR amplification of PVM-150/M

<400> 90  
acaaagcgtg ccagtaaatt attcagcgaa ttcgaggtcg ataatgaaca accaaccacc 60  
cgggcacaga 70

<210> 91  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer 4 for ligation-free PCR amplification of PVM-150/M

<400> 91  
cgctttgttg gagcatcatt atccttgtaa gtgatacgcc acatggcgaa gagtttctgt 60  
gcccgggttg 70

<210> 92  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer 5 for ligation-free PCR amplification of PVM-150/M

<400> 92  
tgctccaaca aagcgtgcca gtaaattgtg cgtccgaatc tacatgaagc ccaagcacgt 60  
tcgatgctcc 70

<210> 93  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer 6 for ligation-free PCR amplification of PVM-150/M

<400> 93  
tactggcacg ctttgttgga gcatcggtat ccacttcaat aatggcgagg cagccggagc 60



# sequence listing

atcgaacgtg

70

<210> 94  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer 7 for ligation-free PCR amplification of PVM-150/M

<400> 94  
caaagcgtgc cagtaaatta gacaactacc agtcccatg cgcgatcaat gaacaaccaa 60  
ccacccgggc 70

<210> 95  
<211> 82  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer 8/Eag I for ligation-free PCR amplification of PVM-150/M

<400> 95  
tattaacggc cgacaacctg aggggaaccac gacgcgggtc tgatagaagc acccagcgga 60  
tttctgtgcc cgggtggttg gt 82